# Eric Funk, Ph. D.

## **Publication Record**

### **Book Chapters**

Vincent J. Urick, Frank Bucholtz, and Eric Funk, "High Dynamic Range 100-km Digital Radio-Over-Fiber Links." in *Microwave Photonics, 2nd Ed.*, Ed. Chi H. Lee, New York: CRC Press, 2013, Ch. 6.

Eric E. Funk, Vincent J. Urick, and Frank Bucholtz, "High Dynamic Range 100-km Digital Radio-Over-Fiber Links." in *Microwave Photonics*, Ed. Chi H. Lee, New York: CRC Press, 2006, Ch. 6.

Eric E. Funk, C. C. Kung, E. A. Chauchard, M. J. Rhee, and Chi H. Lee, "Photoconductive switch controlled inductive pulsed power system," in *High Power Optically Activated Solid State Switches*, Eds. Arye Rosen and Fred Zutavern, Norwood, MA: Artech House, 1994, Ch. 4.

#### Journal Publications (Refereed)

M. Bashkansky, H.R. Burris, E. E. Funk, R. Mahon, C.I. Moore, "RF Phase-Coded Random-Modulation LIDAR," *Optics Communications*, vol. 231, pp. 93 - 98. February, 2004.

Eric E. Funk and Mark Bashkansky, "Microwave photonic direct sequence transmitter and heterodyne correlation receiver," *J. Lightwave Technol.* Vol. 21, pp. 2962 - 2967. December 2003.

P. G. Goetz, E. E. Funk, R. Mahon, W.S. Rabinovich, and S.C. Binari, "Quadrature Amplitude Modulation in a Modulating Retroreflector System," *Electron. Lett.*, vol. 39, pp. 1463 - 1464, October 2003.

W.D. Jemison, A. J. Kreuzberger, and E. Funk, "Microwave photonic vector modulator for high-speed wireless digital communications," *IEEE Microwave and Wireless Components Letters*, vol. 12 pp. 125 - 127, April 2002.

Amarildo J. C. Vieira, Peter R. Herczfeld, Arye Rosen, Michael Ermold, Eric E. Funk, William D. Jemison, and Keith J. Williams, "A mode-locked microchip laser optical transmitter for fiber radio," *IEEE Trans. Microwave Theory Tech.*, vol. 49, pp. 1882 -1887, October 2001.

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Y. S. Lai, E. E. Funk, W. L. Cao, Chi H. Lee, Zhi-Yaun Shen, Philip Pang, Dennis J. Kountz, and William Holstein, "Ultra-wideband Pulse Generation and Radiation Using a High Tc Superconductor Opening Switch," *Applied Physics Letters*, vol. 65, pp. 1048 - 1050, 1994.

Y. S. Lai, W. L. Cao, E. E. Funk, Chi H. Lee, S. N. Mao, X. X. Xi, and T. Venkatesan, "500 Hz Picosecond Inductive Energy Storage Pulsed Power System Using a High Tc Superconductor Opening Switch," *IEEE Photonics Technology Letters*, vol. 6, pp. 1255 - 1257, 1994.

E. E. Funk, E. A. Chaurchard, M. J. Rhee, and Chi H. Lee, "80-kW Inductive Pulsed Power System with a Photoconductive Semiconductor Switch," *IEEE Photonics Technology Letters*, vol. 3, pp. 576 - 577, 1991.

### **Conference Publications**

William D. Jemison and Eric E. Funk, "Fiber radio link with microchip laser source," *International Topical Meeting on Microwave Photonics*, Budapest, Hungary, September 10 - 12, 2003.

Eric E. Funk and Mark Bashkansky, "Random modulation CW laser radar with heterodyne detection and phase noise cancellation,"*12<sup>th</sup> Coherent Laser Radar Conference*, Bar Harbor, ME, June 15 - 21, 2003.

Eric E. Funk, Vincent J. Urick, Shane J. Strutz, James L. Dexter, and Keith J. Williams,"110 km 256-QAM Digital microwave over fiber link," *IEEE-MTT-S International Microwave Symposium (IMS)*, Philadelphia, PA, Paper TU5C-3, June 8-13, 2003.

A. L. Campillo, D. A. Tulchinski, E. E. Funk, and K. J. Williams, "RF Phase distortion due to crosstalk in an 8-channel wavelength division multiplexed analog delay line," *2003 Optical Fiber Communications Conference*, Paper FM1, March 23 - 28, 2003.

Peter G. Goetz, W. S. Rabinovich, Timothy J. Meehan, D. S. Katzer, Steven C. Binari, Eric E. Funk, G. C. Gilbreath, Rita Mahon, Lee Swingen, John Rende, "Modulating retroreflector implementation of mil-std 1553 protocol with free-space optics," *Proceedings of the 2003 IEEE Aerospace Conference*, vol. 4, Paper #1559. March 8 - 15, 2003.

INVITED: W. D. Jemison, and E. Funk, "Recent Developments in Fiber Radio Optical Transmitters," 2002 European Microwave Conference, Workshop on Advances Photonics Technologies for Microwave Applications, Milan, Italy, September 23 - 27, 2002.

INVITED: Eric E. Funk, Anthony L. Campillo, David A. Tulchinsky, "WDM for fiber radio and phased array antennas," *IEEE Sarnoff Symposium on Advances in Wired and Wireless Communications*, Trenton, NJ, March 13, 2002.

INVITED: E. E. Funk, W. D. Jemison, P. R. Herczfeld, "Hybrid fiber/millimeter-wave wireless for broadband last mile access," *14th Annual Meeting of the IEEE Lasers and Electro-Optics Society (LEOS)*. La Jolla, CA, pp. 52 - 53, November 11-15, 2001.

E. E. Funk, A.L Campillo, and D.A. Tulchinsky ,"Nonlinear distortion and cross-talk in microwave fiber-radio links," *2002 IEEE-MTT-S International Microwave Symposium IMS*), Seattle, WA, pp.1691 -1693, June 2 - 7, 2002.

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Keith Williams, David Tulchinsky, and Eric E. Funk, "Multiplexed RF Antenna System Using Optical Wavelength Division Multiplexing," *Government Micro-circuits Applications Conference (GOMAC)* 2002, Monterey, CA, March 11, 2002.

Eric. E. Funk, P. R. Herczfeld, W. D. Jemison, and Maja Bystrom, "Performance limits of a hybrid fiber/millimeter-wave wireless system," *Proceedings of the 2001 SBMO/IEEE MTT-S International Microwave and Optoelectronics Conference*, Belém, Brazil, pp. 51 – 56, 2001.

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E. E. Funk, Scott Ramsey, and Chi H. Lee, "A Photoconductive Correlation Receiver for Wireless Digital Communications," *1998 International Topical Meeting on Microwave Photonics*, Princeton, NJ, October, 1998.

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E. E. Funk, and Chi H. Lee, "An optoelectronic RF wireless communications system," 10th Annual Meeting of the Lasers and Electro-Optics Society, pp. 391-392, 1997.

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Y.S. Lai, E. E. Funk, Chi H. Lee; V. Talyansky, T. Venkatesan, Z. Y. Shen, P. Pang, and C. F. Hi, "Generation of ultra-wideband radiation from high Tc superconductor devices," *Digest of the 1995 LEOS Summer Topical Meeting*, pp. 65 - 66, 1995.

Eric E. Funk, Stephen E. Saddow, Louis J. Jasper, and Chi H. Lee, "Time Coherent Ultra-Wideband Pulse Generation Using Photoconductive Switching," *Digest of the 1995 LEOS Summer Topical Meeting*, pp. 55 - 56, 1995.

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E. E. Funk, E. A. Chauchard, M. J. Rhee, and Chi H. Lee, "Generation Of An 80 KW Pulse In A Photoconductive Semiconductor, Switch Controlled Inductive Energy Storage Pulsed Power System," *Digest of Technical Papers, Eighth IEEE International Pulsed Power Conference*, pp. 1012 - 1015, June 16-19, 1991.

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